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[US/US]; 126 East Lincoln Avenue, Rahway, NJ 07065-0907 (US).

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*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

(54) Title: ISOLATED NUCLEIC ACID MOLECULE ENCODING A NOVEL CENTROMERE-ASSOCIATED MOTOR PROTEIN, AND USES THEREOF

(57) Abstract: An isolated nucleic acid is provided which encodes a novel centromere-associated motor protein, HsCENP-E. Also provided are the purified polypeptide encoded by the nucleic acid sequence, and antibodies immunologically specific for the polypeptide. These biological molecules are useful as markers of cellular proliferation, particularly for the identification of cells in the G2 and M phases of the cell cycle. Methods are provided for using the nucleic acid, protein and antibodies for assessing cellular proliferation in biological fluids and tissue samples, and for detecting the presence of autoantibodies to the protein.

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# INTERNATIONAL SEARCH REPORT

International application No.

PCT/US03/18203

## A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : C07H 21/04; C12N 15/00, 1/20, 5/00

US CL : 536/23.1, 23.2; 435/6, 15, 320.1, 325, 252.3

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 536/23.1, 23.2; 435/6, 15, 320.1, 325, 252.3

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)  
Please See Continuation Sheet

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6,544,766 B1 (BERAUD et al) 08 April 2003 (08.04.2003), entire document.	1-3, 5-10, 12-17
X	WO 02/02055 A2 (ANADYS PHARMACEUTICALS, INC.) 10 January 2002 (10.01.20002), entire document.	1-3, 5-10, 12-17

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Further documents are listed in the continuation of Box C.

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See patent family annex.

* Special categories of cited documents:		"T"	later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"A"	document defining the general state of the art which is not considered to be of particular relevance	"X"	document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"E"	earlier application or patent published on or after the international filing date	"Y"	document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
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"O"	document referring to an oral disclosure, use, exhibition or other means		
"P"	document published prior to the international filing date but later than the priority date claimed		

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**Continuation of B. FIELDS SEARCHED Item 3:**

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SEQ.ID.NO: 2 has been searched on all commercial databases.